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EXAMINER				
BLAIR, KILE O				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/826,531

**Applicant(s)**

CHEUNG ET AL.

**Examiner**

Kile O. Blair

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office action is in response to the communication filed 10/30/08. Claims 13-25 are pending. Claims 1-12 are canceled.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/08 has been entered.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 16-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al. (US Pub. No. 2001/0038698 A1, herein after as Breed, see PTO-892 mailed 10/23/2007) in view of Wang (US Pat. No. 6,484,040 B1).

Regarding claim 1, Breed teaches a peripheral apparatus for an electronic device, said peripheral apparatus comprising: a directional speaker that provides

ultrasonic sound output in a particular direction (directional speaker 357, [0144], fig. 10); and a controller operatively connected to said directional speaker, said controller operating to supply signals to said directional speaker so that the ultrasonic sound is output by said directional speaker (controller must be present to create hypersound as disclosed, [0144]), wherein the ultrasonic sound output by said directional speaker results in audio sound in the particular direction for a user of the electronic device (the microphone is disclosed to be directed to the driver's mouth and the directional speakers are disclosed to worked similarly, [0144]).

Although Breed does not explicitly disclose the feature wherein the electronic device is a personal, hand-held wireless communication device, and said peripheral apparatus is configured to be removeably connected to the personal, hand-held wireless communication device, Wang teaches a mobile telephone capable of being connected, either by a cable (col. 1, lines 32-33) or infrared transmission (col. 1, lines 46-55), to the car speaker for outputting the other side of the phone call, i.e. the person that the user is speaking with on the other line, through the car speakers. Since Breed discloses a cellular phone system for speaking through a speaker mounted in the car, although not explicitly where the cell phone is a conventional hand-held cell phone, it would have been obvious to one of ordinary skill in the art to use the invention of Breed with the hand-held cell phone connection of Wang with the motivation of having a hand-held cell phone unit, capable of being controlled by hand, instead of the dashboard integrated version disclosed by Breed. Wang also discloses that the cell phone is

capable of being handheld and portable when connected to the car speaker through cable or infrared (Wang, fig. 3).

Regarding claim 14, Breed in view of Wang teaches a peripheral apparatus as recited in claim 13, wherein the electronic device has a peripheral connection port, wherein said peripheral apparatus connects to the electronic device at the peripheral connection port, and wherein the peripheral connection port is an electronic card slot (signal transmission card 21, col. 2, lines 26-31) or a serial bus port.

Regarding claim 16, Breed teaches a peripheral device for a computing device, said peripheral device comprising: a housing (dashboard, Breed, fig. 10; or alternatively the signal transmission card 21 of Wang when taken in combination with Breed, col. 2, lines 26-31); a directional speaker coupled to said housing (directional speaker 357 is coupled in dashboard and coupled operatively to the signal transmission card of Wang, Breed, [0144], fig. 10), said directional speaker being configured to provide ultrasonic sound output in a particular direction (directional speaker 357, Breed, [0144], fig. 10), wherein the ultrasonic sound output by said directional speaker results in audio sound in the particular direction for a user of said computing device (the microphone is disclosed to be directed to the driver's mouth and the directional speakers are disclosed to worked similarly, Breed, [0144]); a controller within said housing and operatively connected to said directional speaker, said controller operating to Supply signals to said directional speaker so that the ultrasonic sound Is output by said directional speaker (controller must be present to create hypersound as disclosed, Breed, [0144]).

Although Breed does not explicitly disclose the feature of a port connector configured to assist with coupling said peripheral device to the computing device so that said computing device can drive said directional speaker to produce the audio sound, Wang teaches a mobile telephone capable of being connected, either by a cable (col. 1, lines 32-33) or infrared transmission (col. 1, lines 46-55), to the car speaker for outputting the other side of the phone call, i.e. the person that the user is speaking with on the other line, through the car speakers. Since Breed discloses a cellular phone system for speaking through a speaker mounted in the car, although not explicitly where the cell phone is a conventional hand-held cell phone, it would have been obvious to one of ordinary skill in the art to use the invention of Breed with the hand-held cell phone connection of Wang with the motivation of having a hand-held cell phone unit, capable of being controlled by hand, instead of the dashboard integrated version disclosed by Breed. In providing the connection system, Wang uses a port connector (signal transmission card 21, col. 2, lines 26-31; or alternatively a cable that must be connected through ports, Wang, col. 1, lines 32-33).

Regarding claim 17, Breed teaches a peripheral device as recited in claim 16, wherein said directional speaker is integral to said housing (speaker 357 is integral to the dashboard, Breed, fig. 10), and wherein when said peripheral device is operatively connected to said computing device, said computing device directs audio signals to said peripheral device (infrared transmission, Wang, col. 1, lines 46-55).

Regarding claim 18, Breed teaches a peripheral device as recited in claim 16, wherein said peripheral device further comprises a cable that connects said peripheral

device to said computing device via a connector or plug (cable connection of disclosed background art, Wang, col. 1, lines 32-34).

Regarding claim 20, Breed teaches a peripheral device as recited in claim 16, wherein said housing is configured as a peripheral bus plug-in card (signal transmission card 21, Wang, col. 2, lines 26-31).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed in view of Wang in further view of Kondo et al. (US Pat. No. 4,292,679, hereinafter as Kondo).

Regarding claim 15, Breed in view of Wang teaches a peripheral apparatus as recited in claim 14, wherein said peripheral apparatus further comprises a housing for said peripheral apparatus (dashboard, Breed, fig. 10).

Although Breed in view of Wang does not explicitly teach the feature wherein said peripheral apparatus further comprises a mechanical mechanism that allows said directional speaker to move relative to said housing, thereby allowing repositioning of said directional speaker to direct the sound output towards different directions, it would have been obvious to make the speaker of Breed repositionable since Breed discloses that the microphone will be aimed at the driver and that the directional speakers can function the same way (Breed, [0144]). Also, although Breed in view of Wang does not explicitly disclose a mechanically repositionable directional speaker, Kondo teaches a directional ultrasonic speaker that is repositionable (Kondo, col. 2, lines 62-67) and it would have been obvious to use the mechanical repositioning system of Kondo with the

system of Breed in view of Wang with the motivation of repositioning the speaker to point towards the driver.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed in view of Wang in further view of Colmenarez et al. (US Pat. No. 6,498,970 B2, hereinafter as Colmenarez).

Regarding claim 19, Breed in view of Wang teaches a peripheral device as recited in claim 16.

Although Breed in view of Wang does not explicitly disclose the feature wherein said peripheral device further comprises a camera, Colmenarez teaches an internally mounted dashboard camera 19, Colmenarez, fig. 1B, col. 3, lines 5-20) for identifying the driver and activating a vehicle mechanism. It would have been obvious to one of ordinary skill in the art to use the facial recognition of Colmenarez in the dashboard of Breed in view of Wang with the motivation of providing proper authorization for the use of the cell phone system of Breed in view of Wang since Colmenarez discloses that the cameras can be used to provide authorization to activate various vehicle mechanisms and it would have been readily apparent to one of ordinary skill in the art that the cell phone system of Breed in view of Wang is a suitable vehicle mechanism for use with the authorization system of Colmenarez.



Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed) in view of Wang in further view of Brain (How Stuff Works- USB, Oct. 11, 2002, see PTO-892 mailed 10/23/2007).

Regarding claim 21, Breed in view of Wang teaches a peripheral device as recited in claim 16.

Although Breed in view of Wang does not explicitly teach the feature wherein said port connector is a USB connector, doing so would have been obvious since Wang discloses that the connection can be a cable connection (Wang, col. 1, lines 32-33) and it would have been obvious to use a suitable USB connection (Brain, ¶ 1) with the motivation of achieving operative connection since Brain discloses that USB can be used to connect telephones (Brain, ¶ 5).

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed in view of Johnson et al. (US Pat. No. 6,279,946 B1, hereinafter as Johnson, see PTO-892 mailed 10/23/2007) in further view of Grady (US Pat. No. 6,591,085 B1, hereinafter as Grady).

Regarding claim 22, Breed et al. teaches a method for automatically selecting one or more of a plurality of potential speakers associated with an audio output device (the speakers can be controlled to provide different outputs for the speakers based on the occupancy of the seats, Breed, [0136]), said method comprising: obtaining a piece of information pertaining to the audio output device (the occupancy of the seats being served by entertainment system and audio output device, the identity of passengers, or

the radio station preferences associated with each seat [0136]); determining an appropriate one or more of the potential speakers to output an audio output from the audio output device based on the piece of information (the speakers associated with each seating position can be controlled to provide music from the respective radio station [0136]); and selecting the appropriate one or more of the potential speakers, wherein at least one of the speakers is a directional speaker (the entertainment system selects the appropriate speakers that direct sound toward each individual occupant based on the respective radio station preference of the occupant. The speakers are directional speakers because they can direct sound to individual occupants, a characteristic not found in non-directional speakers [0136])

Although Breed et al. does not explicitly teach the feature wherein at least one of the speakers is a substantially non-directional speaker, and wherein said determining determines whether the appropriate one or more of the potential speakers are to be directional, substantially non-directional or both based on the piece of information, non-directional speakers were well known and it would have been obvious for one of ordinary skill in the art to combine a non-directional speaker and a directional speaker, both by Johnson et al. (col. 29, lines 19-35) and provide the ability to switch between directional and non-directional speakers based on the occupancy of the seats and the preferences of the users especially when all of the users prefer to listen to the same audio, the non-directional speaker of Johnson et al. would be activated and when the users prefer to listen to different audio programs, the directional speakers would be

activated. Using non-directional and directional speakers together involves using known methods together to yield predictable results.

Although Breed in view of Johnson does not explicitly disclose that the audio output device is hand-held, Grady teaches an MP3 player to be integrated into the sound system of a vehicle (Grady, col. 3, lines 1-17). It would have been obvious to one of ordinary skill in the art to use the MP3 player/vehicle integration system of Grady with the method of Breed in view of Johnson with the motivation of the user providing their own media content through the MP3 player.

It is noted that in the combined teaching of Breed in view of Johnson in further view of Grady, the piece of information pertains to the MP3 player because the piece of information, e.g. the occupancy of the seats being served by entertainment system and audio output device, determines where the audible output of the MP3 player should be directed.

Regarding claim 23, Breed in view of Johnson in further view of Grady teaches the method as recited in claim 22, wherein the piece of information is related to how the hand-held audio output device is presently being used (the occupancy of the seats being served audio output device, i.e. MP3 player, determines where the audible output of the MP3 player should be directed, Breed, [0136]).

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed in view of Johnson in further view of Grady in further view of Zlotnick (US Pub. No. 2004/0114772 A1).

Regarding claim 24, Breed in view of Johnson in further view of Grady teaches a method as recited in claim 22.

Although Breed in view of Johnson in further view of Grady does not explicitly disclose the feature wherein the piece of information is related to an orientation of the hand-held audio output device, Zlotnick teaches a method for using a mobile phone or other hand held electronic device [0002] for sending ultrasonic signals originating at the device and reflecting off of a retro-directive device [0050] and back to the device. The device determines the relative location and direction of the subject to the device which depends on the orientation of the device. It would have been obvious to use the directional device of Zlotnick with the method of Breed in view of Johnson in further view of Grady with the motivation of determining the location of passengers by using the hand held device, i.e. MP3 player, instead of the ultrasonic transducers of Breed mounted elsewhere in the vehicle.

Regarding claim 25, Breed in view of Johnson in further view of Grady teaches a method as recited in claim 22.

Although Breed in view of Johnson in further view of Grady does not explicitly disclose the feature wherein the piece of information is related to a distance from the hand-held audio output device to a surface, the device of Zlotnick determines the distance to the surface of the retro-reflective device from a hand held device, [0050], [0055]. It would have been obvious to use the device of Zlotnick with the method of Breed in view of Johnson in further view of Grady for the same reasons given in the rejection to claim 24.

### ***Response to Arguments***

Applicant's arguments with respect to claims 13-25 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kile O. Blair whose telephone number is (571) 270-3544. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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KB

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2614